

2023 Rural Generalist Anaesthesia (RGA) SSSA Examination Report

This report summarises the areas examined in the 2023 RGA SSSA Examination and is designed to be a useful tool for upcoming exam candidates, Supervisors of Training and other senior colleagues who assist trainees with exam preparation.

Candidates should be aware that whilst the exam is not held at the absolute end of their training, the **standard expected across all aspects of the exam** is that of someone ready to commence independent anaesthesia practice.

The focus of the rural generalist anaesthesia standardised structured scenario-based assessment (RGA-SSSA) is on the practical integration and application of knowledge in clinical practice, with a focus on RGA practice in the rural and remote context.

As **all aspects of the curriculum** mapped to the SSSA are examinable, trainees are advised their best chance of success is to sit the exam when their clinical experience matches their theoretical knowledge. All sections of the exam are referenced to the curriculum, so candidates are advised to be familiar with all aspects of the curriculum.

To achieve a pass the candidate must meet the minimum standards required by the examination. Below are the statistics for this examination

| Date /Day | Sat | Passed | % passing |
|-------------------------|-----------|-----------|--------------|
| 2 Dec 2023 – Saturday | 20 | 18 | 90.00 |
| 3 Dec 2023 – Sunday | 19 | 16 | 84.21 |
| Total Candidates | 39 | 34 | 87.17 |

The Court noted several recurring themes in candidates who attended this exam. They included the following:

1. There appeared a tendency for candidates to provide rote answers versus those who have truly synthesised information and contextualised to the patient. It was noted that candidates frequently relied on pre-planned scripts in assessment and management which occasionally led to content irrelevant to the specific question or scenario, and often wasted time with unnecessary detail that wasn't asked for. Key phrases used out of context continued to emerge, for example some candidates wanting to provide "multi-modal" analgesia for a colonoscopy.

Generally, candidates responded appropriately with their anaesthetic plans, however it often appeared that candidates were attempting to utilise drugs or techniques that they may be less familiar with rather than those they used routinely due to belief that was the 'model' answer for the question. Better candidates had a very good understanding of Scenarioville and were able to apply it to the scenario. Some appeared to be unclear about the resources available to them.

2. There were technical issues with some candidates who did not adhere to the recommended venue/audio/internet instructions. Attending the exam from non-standard / compliant venues (for example operating theatre) not only creates audio issues for the examiners, but also has a distracting background.

It is recommended that candidates source a location that has good internet facilities, audio/headphones are connected properly, and devices are properly charged. Candidates and their invigilators should ensure all computers/devices are plugged in/charged/charging and have sufficient familiarity with device to enable prompt troubleshooting (for example in the event of accidental muting, Bluetooth disconnection).

3. The examination is a formal assessment of your knowledge and whilst formal attire (suit) is not expected, professional business casual attire is recommended. Examiners often have a view of more than the candidate's head and shoulders and attire such as brightly colour shorts or items in the background may be distracting. It is also recommended that candidates avoid attire that identifies them or their training site/region.

RGA-SSSA Notes

The RGA-SSSA assesses candidates on their ability to demonstrate multiple facets of practice in eight evolving and complex viva scenarios.

A pass level in the examination indicates that candidates have attained the minimum standard criteria for an RGA as decided by the Court of Examiners.

Several key areas are tested:

1. Application of safe clinical practice
2. Demonstration of sound clinical judgement
3. Planning and prioritisation of clinical actions
4. Demonstration of the ability to adapt to changing clinical scenarios
5. Justification of clinical decisions
6. Demonstration of situational awareness and the ability to work in and lead team environments

Candidates are expected to demonstrate independent RG anaesthetist thinking and communication. It is paramount that candidates demonstrate safe clinical practice. Some clinical situations in the viva scenarios are designed to assess a candidate's ability to make appropriate decisions in a safe manner. Decisions deemed unsafe practice prevent a candidate from passing the viva.

Communication during the examination is another fundamental skill - not just communicating clinical decisions during the viva, but also progressing through the viva at a pace which will allow the candidate to maximise the full coverage of all areas of the viva. Whilst it is not critical to have completed the whole of the available viva in order to pass, a candidate who is excessively slow in progressing through the viva will have limited time available to attain marks. Better performing candidates will articulate clear, structured answers. Their answers will be organised, even in the face of a complex problem, demonstrating their ability to prioritise the main issues involved. They will also demonstrate independent RG anaesthetist decision making, which is based on sound clinical and evidentiary principles.

Below are the stems for all sixteen vivas. As well as providing the introductory stems, the key areas covered in each viva have also been included. This information can be used by candidates in their exam preparation as an example of the knowledge required to successfully pass the viva examination.

RGA-SSSA 2023.1 Day 1 (Saturday 2nd December 2023)

Viva 1: Resuscitation, Trauma, Crisis Management

CANDIDATE INSTRUCTIONS

It is a Sunday afternoon in Scenarioville and you are called to ED. The patient is a 30-year-old male who has rolled his quad bike. He has a fractured femur and a head laceration on initial assessment. His heart rate is 120 bpm and Blood Pressure is 80/40 mm Hg.

What are the potential causes of hypotension? What is your initial management for this patient?

Component 1: Candidates were required to list differential diagnoses for shock in trauma and outline their initial approach to a trauma patient including “Trauma Call” activation & preparation and describe a Primary Survey.

Component 2: In this scenario the patient’s GCS then drops from 12 to 6 and candidates were required to recognise the need for intubation in the clinically deteriorating patient with traumatic brain injury and describe strategies to prevent secondary brain injury.

Component 3: The third component of this viva assessed the candidate’s ability to outline their practice in arranging retrieval of the patient to a tertiary trauma centre and clinical management of the patient whilst awaiting transfer.

Viva 2: Airway Management

CANDIDATE INSTRUCTIONS

A 28 year old man presents to ED at 12 noon, 24 hours post tonsillectomy. He has been bleeding for 2 hours, with 3 vomits of frank blood that filled a small bowl. His vital signs are HR 110, BP 110/70, O2 sats 98% on room air. This morning, he ate some eggs and had coffee at 0700 hrs.

What are your main concerns with this patient?

Component 1: Candidates were assessed on their ability to identify the key risks relevant to a patient with a post-tonsillectomy bleed. These largely related to airway management – elevated aspiration risk and airway soiling, potentially difficult laryngoscopy and ventilation, and sharing of airway access with the proceduralist as well as haemodynamic issues with blood loss. Candidates were required to recognise the need for a Rapid Sequence Induction for the securement of this patient’s airway and were assessed on their ability to define and describe their approach to an RSI including the utilisation of equipment, drugs and personnel.

Component 2: The clinical scenario proceeded to describe a series of airway findings at laryngoscopy with a view to elicit the candidate’s approach to confirmation of endotracheal

placement, and response to a lack of end tidal CO₂ on the monitor and subsequent deterioration in the patient's clinical condition as evidenced by a declining oxygen saturation reading. Candidates were expected to outline a systematic approach to a potential Can't Intubate Can't Oxygenate situation and describe appropriate planning for Front-of-Neck Access (FONA).

Component 3: The third component of this viva explores aspects of case management where the patient's airway access is shared with the proceduralist as well as appropriate extubation and post-anaesthetic care for a patient who has experienced airway complications in the context of emergency airway surgery. A good candidate was able to outline various risks around extubation and describe an approach to minimise these, and to weigh up whether a higher/tertiary level of care was warranted for this patient.

Viva 3: General Anaesthesia & Sedation

CANDIDATE INSTRUCTIONS

You are currently in pre-admission clinic. Your next patient is a 36-year-old female who is booked for an elective laparoscopic cholecystectomy in 1 weeks' time. She has a Body Mass Index of 38.

Please outline your assessment of this patient.

Component 1: Candidates were required to outline their approach to undertaking a pre-anaesthetic assessment of an obese patient booked for elective surgery, with particular emphasis on obesity related issues including obstructive sleep apnoea (OSA), metabolic syndrome, cardiovascular issues such as hypertension as well as relevant past anaesthetic history including any previous airway difficulties.

With further information provided about the patient including potentially difficult airway, history of post-operative nausea & vomiting (PONV), and chronic opioid use, it was expected that a candidate would recognise that although there are increased risks with this patient, it is within the RGA scope of practice.

Component 2: The clinical scenario moves on to the day of surgery and candidates were asked to outline their anaesthetic induction, intraoperative anaesthetic plan and extubation plan. Candidates were required to recognise and address the obesity-related risk factors and demonstrate clinical reasoning behind their approach including choice of drugs and equipment.

Component 3: The third component of this scenario is in the Post-Anaesthetic Care Unit (PACU/Recovery) and required candidates demonstrate an understanding of discharge criteria and recommendations as outlined in ANZCA Professional Document PG15(POM) *Guideline for the perioperative care of patients selected for day stay procedures 2018* and to take into account factors such as post-operative analgesia in a patient with OSA and late risk of PONV in the rural context. This component was generally answered well by most candidates.

Viva 4: Regional Anaesthesia

CANDIDATE INSTRUCTIONS

A 65 year old female (60kg) is having a right total knee replacement.

- Past medical history: Hypertension, Type 2 Diabetes, Glaucoma
- Medications: Metoprolol, Candesartan, Metformin, eye drops
- No known drug allergies.

You take over the case after your colleague has placed a spinal anaesthetic with 2.7ml 0.5% heavy bupivacaine and 15mcg fentanyl. They have handed over the case, with an adequate block (motor block and T4 bilaterally to cold). Surgeons are prepping the skin.

The patient complains of nausea and starts dry retching. What do you do?

Component 1: This scenario begins with a patient who has nausea and vomiting in the context of spinal anaesthesia. Candidates were assessed on their ability to assess this situation by obtaining relevant information such as vital signs from anaesthetic monitors and to recognise bradycardia with haemodynamic compromise on being provided with a heart rate and blood pressure reading. Candidates were expected to list differential diagnoses and describe their initial management of this clinical situation. Most candidates identified a high spinal and treated the bradycardia and hypotension. Atropine, ephedrine and adrenaline were mentioned, with appropriate 10-20 microgram doses of adrenaline quote.

Component 2: The clinical scenario then moves to the Recovery/Post-Anaesthetic Care Unit (PACU) and candidates were required to list differential diagnoses for agitation and light-headedness in a patient who had received a large volume of local anaesthetic drug shortly prior, including Local Anaesthetic Systemic Toxicity (LAST). Candidate were then asked to describe clinical features of LAST and outline the management of LAST. To avoid candidates simply following ALS protocol, it was specified the patient had persistent ventricular tachycardia but remained haemodynamically stable prompting candidates to further explore LAST treatment.

Component 3: The third component of this scenario assesses post-critical incident management including clinical care of a patient with ongoing haemodynamic instability in the rural context, the need to consider transfer to a higher level of care and aspects of post-critical incident documentation and communication.

Viva 5: Paediatric Anaesthesia

CANDIDATE INSTRUCTIONS

You will be doing an elective dental list in SCENARIOVILLE next week. The first patient on the list is a 10 year old boy, who is ~25kg, for a dental examination under anaesthesia +/- restorations as required. He has had limited medical or dental care due to behavioural issues.

Past Medical history includes: • Autism (non-verbal) • ADHD • Mild asthma

Allergies: Nil

Medications: • Melatonin 5 mg nocte • Ritalin 10 mg bd (mane, midi) • Salbutamol PRN

How will you plan in advance for his anaesthetic?

Component 1: Candidates were expected to realise that they had one week to prepare this child for anaesthesia, and to recognise that due to severe autism it would be difficult and establishing rapport with the child's parent(s)/carers would be important for success. Candidates were assessed on ability to identify the various issues and how they would approach each of them. Pre-medication would be important, and candidates were expected to be aware of a few options, (preferably but not necessarily including dosing which could be checked), and to be aware of pros and cons of the various options.

Component 2: Following the pre-operative assessment, the scenario moved to the day of procedure. The dentist asks for a nasal tube. Candidates were assessed on knowledge of the advantages and disadvantages of using a nasal tube vs oral ETT or LMA. Having agreed to nasal intubation and with working premed, planned for intravenous induction when the child became unco-operative. Candidates were asked how will you induce this child? They were assessed on the approach retrieving a situation for intravenous induction, versus an approach for safe inhalational induction.

Component 3: The scenario evolved with a sudden loss of EndTidal CO₂ trace on the monitor. Candidates were assessed on their knowledge of potential causes of this situation with good candidates having a sensible approach to this issue and a methodical approach to identify the cause, including differentials of common less serious issues through to rarer and more serious, potentially life-threatening situations. The candidate was then told that the cause was identified as a simple disconnection near the filter-end of the circuit which was resolved by reconnection with the case proceeding uneventfully. They were then asked how they would manage extubation of this child. Candidates were assessed on having a safe approach to either awake or deep extubation, knowing the pros and cons of each and possible complications that may arise at this stage of the procedure. Finally, candidates were then asked how they would decide when to proceed with the next patient. Again, assessment was on having a safe approach to this question.

Viva 6: Pain Medicine

CANDIDATE INSTRUCTIONS

You are the on-call rural generalist for the Scenarioville hospital. Your rural generalist colleague calls you at 11pm from the emergency department to ask for your assistance with analgesic management of a case. A 25 year old, otherwise fit and well male has presented with bilateral foot and lower leg burns after walking in a campfire after a couple of beers. He has been given 5mg of IV morphine by the paramedics during the 1 hour retrieval time from his campsite. On your assessment, he is writhing in pain, slurring his words, and appears to have an altered level of consciousness.

What are your considerations with respect to his analgesic management in the Emergency Department?

Component 1: This clinical scenario describes a patient with severe acute pain despite a small dose of morphine, and an altered level of consciousness (LOC). Candidates were expected

to indicate that they recognised the likely inadequacy of a dose of 5mg of morphine for this patient and an appreciation of the potential causes of the altered LOC such as head injury and intoxication. They were required to formulate an appropriate strategy for multimodal analgesia in the Emergency Department setting and plan for ongoing analgesia as an inpatient. Good candidates were able to outline their approach to opioid analgesia using oral and/or parenteral routes and consider the use of ketamine.

Component 2: Candidates were then advised that the patient is to be managed locally for recurrent burns dressing changes and were expected to demonstrate knowledge of the requirements for safe procedural sedation and to discuss techniques and drugs for analgesia & sedation. Better candidates mentioned appropriate discussion with the surgeon about extent and frequency of dressing changes, and where they would be performed (ward, procedure room or theatre).

Component 3: The final part of this clinical scenario is set 3 months later with the patient describing symptomatology that is typically associated with neuropathic pain. Candidates were expected to recognise that this is pain neuropathic features and to be able to list common management strategies for neuropathic pain including pharmacological and non-pharmacological strategies. If opioids were used as part of the strategy, a de-escalation plan needed to be included.

Viva 7: Obstetric Anaesthesia

CANDIDATE INSTRUCTIONS

It is 2pm on a weekday. You are on-call, and the elective list is finished for the day. The on-call obstetrician rings you, informing you of her decision to take Beth into theatre for a LSCS. You were given the following details about Beth:

- 40-year-old lady from interstate, G5P4 (2 x vaginal deliveries; 2 x LSCS). Currently 38 weeks gestation
- Booked for an elective LSCS somewhere else interstate
- Came to attend a funeral at Scenarioville
- Presented in labour. 4cm dilated on VE. CTG reassuring.
- Bedside ultrasound performed today showed a low-lying anterior placenta
- No previous medical records locally. Patient's pregnancy handbook unavailable.
- Had lunch 2 hours ago.

What are your main concerns with this patient? How will you proceed with assessing this patient?

Component 1: Candidates were asked to identify features of the patient's history that would raise a concern of increased risk of adverse outcomes which needed to include at a minimum the increased risk of peripartum/postpartum haemorrhage (PPH) due to low lying placenta and grand multiparity. Only a few candidates mentioned placenta accreta spectrum disorders as a risk factor. Additional concerns that could be listed included elevated aspiration risk and risk of uterine rupture. Candidates were expected to provide a description of how they would

assess this obstetric patient who has limited antenatal history available, considering the risk features identified.

Component 2: Candidates were asked to outline their plan for anaesthetic management of this patient, which was expected to include: Suitability for management locally in Scenarioville; Consent including the possibility for blood product transfusion; Clinical preparation such as arranging a Blood Type & Screen or cross-match; Suitable IV access given the risk of PPH; Choice of anaesthetic technique (neuraxial or GA) with some detail on how this might be performed in a way that minimises risk - e.g. RSI if GA chosen, vasopressors prepared if neuraxial chosen. Most candidates provided their usual spinal anaesthesia doses; those performing at a higher level considered adjusting the plan to accommodate a repeat Caesarean section that might lead to a longer surgery duration.

Component 3: Clinical information was provided that included >1.5L blood loss and haemodynamic changes consistent with PPH. Candidates were expected to describe their management of obstetric haemorrhage including pharmacological measures (tranexamic acid, uterotonic agents) and blood product use in critical bleeding management. The answers to this were often rather formulaic and not well contextualised to Scenarioville and obstetrics, with frequent use of 2L of crystalloid prior to blood product replacement and a focus on 1:1:1 replacement rather than recognising the pre-existing dilutive coagulopathy of pregnancy and the value of early fibrinogen replacement.

Better candidates included leadership and communication with the clinical team, demonstrated an understanding of the surgical steps likely to be taken actions when encountering a PPH and an appreciation of the potential need for conversion to GA and subsequent transfer to a tertiary centre. For those who gave a description of how they would manage a conversion to GA, it was concerning that most wanted to omit opiates and quoted doses of these, and induction agent would be considered high for an induction in a shocked patient.

Viva 8: Perioperative Medicine

CANDIDATE INSTRUCTIONS

An 82 year old female has presented with a severely angulated distal radius fracture with median nerve paraesthesia, after slipping on a step outside the local pub this afternoon. The general surgeon indicates that urgent reduction of the fracture is required within 2 hours.

Past Medical History:

- Rheumatoid Arthritis
- Asthma
- Hypertension

Pre- Operative ECG: Atrial Fibrillation at rate 70-80

Medications:

- Prednisolone 5 mg daily
- Candesartan 4 mg daily
- Omeprazole 20 mg mane
- Methotrexate – 20 mg weekly (for arthritis)

- Abatacept injection- 125 mg weekly (for arthritis)
- Folic acid – daily
- Ciclesonide 160mcg – 1 puff daily
- Salbutamol PRN

How can this patient be further assessed prior to their procedure?

Component 1: This scenario presented a patient with several comorbid conditions requiring emergency anaesthesia/sedation for a trauma-related injury. In addition to briefly describing an anaesthetic assessment that included the patient's fasting status, candidates were expected to outline their evaluation of potential precipitants of the fall and any associated injuries; rheumatoid arthritis including severity and potential implications for airway management; atrial fibrillation (AF) including reversible causes; the severity and stability of the patient's asthma and hypertension.

Most candidates struggled to recognise that the use 3 DMARDs for their rheumatoid arthritis, and who remains on steroids despite the use of biological agents, is a marker of severe disease in the patient.

Component 2: Candidates were asked how they would optimise the patient and were expected to describe how they would approach this for the patient's asthma and AF. They were also asked about their plan for the anaesthetic which was expected to consider the location for the procedure (ED vs theatre), aspiration risk, potentially difficult airway, risk of rapid AF and justification for the choice of anaesthesia (GA or regional). Good candidates presented a thorough synthesis that considered patient, anaesthetic and surgical factors in their clinical reasoning.

A significant proportion of candidates opted for a Bier's block, but none mentioned the potential for intoxication/uncooperativeness. Those candidates who opted for GA/RSI described appropriate dose reduction for the elderly and co-morbid patient.

Component 3: The third part of the scenario takes place in the PACU, where the patient has developed a heart rate of 124bpm. Candidates were expected to outline their assessment and treatment of the patient with new tachycardia including checking vital signs and ECG, review for features of unstable AF and/or ischaemia, blood tests and electrolyte replacement as appropriate.

Most candidates had a systematic approach to this and considered simple causes and treatment (analgesia, fluid resuscitation) for the patient's AF prior to pharmacological options. Several candidates did not commit to choosing a drug until they had spoken with a physician or cardiologist at a tertiary centre. Better candidates went on to address safe discharge from PACU and an ongoing post-operative plan were considered excellent.

DRGA-SSSA 2023.1 Day 2 (Sunday 3rd December 2023)

Viva 1: General Anaesthesia & Sedation

CANDIDATE INSTRUCTIONS

You are currently doing an all-day endoscopy list in the procedure room. The surgeon would like to add an 80 year old male patient to the end of your afternoon list. He was admitted 2 days ago with a partial bowel obstruction from a possible right sided colon cancer and has undergone bowel preparation as best tolerated. He has a background of COPD and has a decreased eGFR.

What specific additional information do you want to obtain prior to proceeding with his case?

Component 1: Candidates were assessed on their ability to formulate a systematic approach to pre-anaesthetic assessment for an emergent procedure. Candidates were expected to identify several key issues that they would seek more information on in the assessment process, including the patient's clinical status from the presenting pathology (partial bowel obstruction) and comorbidities (cancer, COPD, decreased eGFR). Rather than answering the question which asked the candidate to explore for *additional information*, many candidates tended to repeat key concepts of the question stem back instead of using the time to synthesise, summarise and outline key pertinent points in their responses. Some candidates provided a general summary of assessment for an anaesthetic check, rather than nuanced responses relative to the clinical scenario, and some decided the patient was unsuitable for Scenarioville despite not having elicited much information about him at that point. There was a focus on zero-point survey aspects of theatre team well-being but no mention of cancellation of elective cases to facilitate better conditions, only cancellation of this particular case.

Component 2: Candidates were expected to formulate a plan for anaesthesia induction that addressed aspiration risk and hypovolaemic state and to provide appropriate justification for the choice of induction drugs and the doses chosen. Most candidates reflected on the fluid status of the patient, and better candidates indicated amounts and endpoints they were providing fluid to. Some opted for arterial cannula placement pre-induction, but none sought a blood gas to evaluate lactate as a surrogate measure of resuscitation adequacy. Opiate dosing and propofol dosing in haemodynamically compromised patients was concerning, often being very generous for a compromised elderly patient. Some candidates wanted to use ketamine despite being clearly unfamiliar with it, and descriptions of maintenance strategies given were also suggestive of candidates providing what they felt was a model answer rather than describing what they were familiar with and would normally use.

Component 3: Candidates were expected to recognise potential safety concerns, describe their assessment and take a systematic approach to managing the patient who becomes agitated and confused in the Recovery/Post-Anaesthesia Care Unit (PACU) setting. The management described by candidates was very algorithm driven, often an "A to E" approach, and did not demonstrate that they had an appreciation that hypoxia is a highly likely cause for

post-op agitation in a patient who aspirated at induction and was initially hypoxic. Almost all candidates required prompting to consider the post-operative disposition of the patient/plan for discharge from PACU.

Viva 2: Perioperative Medicine

CANDIDATE INSTRUCTIONS

You are currently in pre-admission clinic and are seeing this patient for the first time. He is a 62 year old man who has been scheduled for a Category 2 (SemiUrgent within 90 days) elective Laparoscopic Cholecystectomy for recurrent biliary colic. Surgery is planned for two weeks from today.

Past Medical History: • Type 2 Diabetes Mellitus • Hypertension • Ischaemic Heart Disease (coronary stents 2 years ago, stable) • Ex-Smoker (40 pack years) • 110kg, BMI 35.4

Medications: • Atenolol 50 mg daily • Atorvastatin 40mg daily • Aspirin 150mg daily • Ramipril 5mg daily • Empagliflozin 25mg daily • Metformin 1000mg XR daily • Clopidogrel 75mg daily • Glargine Insulin (Lantus) 40 units nocte

Examination

• BP: 150/95, HR 60, Temp 36.5 oC, SpO2 94% (Room Air) • Chest: scattered rhonchi on auscultation • Heart: HS dual, no murmur

How can this patient be further assessed prior to their procedure?

Component 1: Candidates were expected describe their assessment of the severity and stability of the patient's comorbidities (Type 2 diabetes, hypertension, ischaemic heart disease, smoking, obesity), and conditions associated with these (COPD, OSA, reflux) relevant to anaesthesia. Good candidates also made mention of assessment of exercise tolerance and patient airway. Better candidates commented on the suitability for the procedure to be done in Scenarioville with justification.

Component 2: The candidate was provided with some further history and asked to outline how they would optimise the patient's medical conditions and manage the patient's medications. Candidates were required to describe optimisation measures for at least two of glycaemic control, hypertension and COPD. Medication management needed to include cessation of the SGLT2-inhibitor and consideration of insulin, antiplatelet agents and antihypertensives, with clinical reasoning.

Component 3: In this component the patient develops ST elevation on ECG under anaesthesia. Candidates were expected to outline their immediate intraoperative management of potential myocardial ischaemia as well as the subsequent management in Recovery/PACU of a perioperative cardiac event including clinical assessment (serial 12-lead ECG, Troponin levels). Good candidates included a plan for disposition such as a post-op monitored bed and cardiology follow up.

Viva 3: Obstetric Anaesthesia

CANDIDATE INSTRUCTIONS

Its 10am on a weekday morning when you are on-call for anaesthesia. You are called by a midwife on the labour ward to provide an epidural for Sarah.

Sarah's details are:

- 39-year woman who has recently moved to the area.
- G3 P1 previous emergency caesarean
- Has a new partner
- Her current gestation is 39 weeks.
- This is an IVF pregnancy.
- She has a BMI of 38 calculated this week.
- She has just arrived in the labour ward in spontaneous labour.
- Her last BP was 145/110.

Her recent bloods:

| | Booking | 30-Week Gestation | 38-week Gestation | Today 39-Week Gestation |
|-----------|---------|-------------------|-------------------|-------------------------|
| Hb | 110 | 112 | 108 | 95 |
| WCC | 11.1 | 10.2 | 10.3 | 15.2 |
| Platelets | 330 | 327 | 334 | 101 |

What are your main concerns? How would you proceed with the anaesthetic assessment?

Component 1: Candidates were required to mention hypertension, risk of pre-eclampsia and thrombocytopenia/precipitous platelet drop. Better candidates listed additional concerns and described how these might relate to challenges in anaesthesia care. In assessment of the patient, candidates were required to explore current and past obstetric / pregnancy history, current hypertensive/pre-eclampsia history and symptoms, anaesthetic history, past medical history and explore medical comorbidities associated with the maternal risk factors given. Examination was expected to cover airway assessment, back/lumbar spine, focused CVS/resp, and signs related to pre-eclampsia.

Component 2: Candidates were required to recognise pre-eclampsia and the significance of thrombocytopenia and explore this further with a request for repeat platelets plus blood tests and urinalysis for end organ involvement in PET. There was an expectation that the candidate would discuss this patient with their Obstetric colleague and discuss commencing antihypertensive treatment. Due to the precipitous drop of platelets, it was expected that the platelet count would be repeated prior to any neuraxial procedure. Epidural consent required an explanation of the procedure, specific risks, and a discussion of risk vs benefit vs alternatives. Better candidates were able to contextualise the current scenario with the risk discussion. Discussion about suitability for the rural centre was required.

Component 3: Candidates were required to recognise the eclamptic seizure and treat with magnesium. Active management of hypertension was expected, as well as an early conversation with

the Obstetrician to discuss a plan for delivery. Patient management was expected to focus on stabilisation, treating the seizure, preventing further seizures and morbidity associated with the hypertensive crises. Candidates were expected to discuss how the RSI for a GA caesarean section would be different in this patient and setting to other GA RSI cases.

Viva 4: Pain Medicine

CANDIDATE INSTRUCTIONS

It is 9pm in Scenarioville and you are called by the surgical registrar to provide anaesthesia for an emergency laparotomy for a presumed bowel obstruction.

The patient is Clive, a 70 year old, BMI 33 (weight 100kg) male with a past history of well-controlled hypertension, hypercholesterolaemia, obstructive sleep apnoea and chronic back pain.

His regular medications are:

• Targin 10/5mg BD (Oxycodone 10/ Naloxone 5) • Perindopril 4mg OD • Rosuvastatin 20mg OD

What features in this patient's history would influence your choice of analgesia and why?

Component 1: Candidates were expected to recognise the potential impacts of the patient's chronic opioid use and obstructive sleep apnoea (OSA) on their analgesic requirements following a laparotomy. Good candidates were able to describe considerations of opioid sensitivity, increased risk of cardiorespiratory complications and mentioned the need for a higher level of nursing care in the post-operative period. Good candidates also recognised that absorption of orally administered medications would potentially be a problem in a patient with bowel obstruction. The role of intraoperative multimodal analgesia in this patient was highlighted by good candidates.

Component 2: Candidates were then asked about their approach to the patient having severe pain half an hour into the patient's time in the Post-Anaesthesia Care Unit (PACU)/Recovery. They were expected to state that they would attend and assess the patient and describe their assessment which was expected to consider analgesia already given by nursing staff in PACU, any opioid side effects if present, sedation levels and potential causes for the pain including any post-surgical complications. Candidates were required to outline a plan for multimodal analgesia in PACU and subsequently on discharge (to the ward), which included opioids by PCA, or nurse administered pain protocol, adjuncts including paracetamol and consideration NSAIDs, and ketamine as rescue analgesia. Better candidates recognised that Targin absorption in this may be affected with this clinical picture and considered that the patient may need an increased level of monitoring and nursing care (e.g. continuous oxygen saturation monitoring).

Component 3: The scenario moves to the post-surgical ward setting 3 days later, with candidates being asked to describe an ongoing analgesic plan now that the patient had improved, as indicated by decreased PCA opioid requirements and ability to now eat a full

diet. Candidates were expected to recognise that the patient can transition from parenteral to oral analgesia, and to formulate an appropriate transition plan which included recommencement of the patient's regular Targin. Better candidates included a plan for the patient's opioids on discharge with some thought toward longer term opioid reduction strategies, and considered discontinuation of NSAIDs on discharge if these were used.

Viva 5: Resuscitation, Trauma, Crisis Management

CANDIDATE INSTRUCTIONS

It is 7 pm in Scenarioville and your next case is a 22-year-old for a Laparoscopic Appendicectomy. He is a smoker, with a past medical history of childhood asthma. He weighs 80 Kgs (BMI=25), and his airway appears normal. He has nausea but is well fasted and has no family history of anaesthetic issues.

Anaesthesia was induced with Propofol, Fentanyl and Rocuronium. The patient has been intubated without incident. Before surgery starts you notice elevated airway pressures on the machine.

What are the potential causes and what would be your approach in identifying them?

Component 1: Candidates were assessed on their ability to define and categorise potential causes of elevated airway pressures, and their ability to formulate an approach to their identification. Good candidates were able to formulate a systematic and logical approach that was in keeping with their categorisation of causes. Candidates who struggled either were unable to define and categorise common causes or were unable to describe a systematic approach with which they would identify potential causes to this common clinical problem.

Component 2: The clinical scenario progressed to a situation that was commensurate with Grade 3 anaphylaxis. Candidates were expected to recognise likely anaphylaxis, recognise the severity of the reaction, and provide an approach to management. Better candidates were again able to work through their management with a systematic and logical approach and could provide details of secondary management following their immediate crisis management with recognition of human factors and a potential plan for follow-up.

Component 3: The third part of the scenario required candidates to formulate a plan for transfer of the patient out of Scenarioville, detailing both their approach to patient management, communication, and coordination. Better candidates demonstrated pragmatic knowledge of the likely issues encountered, and their considerations for incident reporting and post-crisis debrief management.

Viva 6: Paediatric Anaesthesia

CANDIDATE INSTRUCTIONS

You are on-call and on-site in Scenarioville Hospital. You receive a call that a 5 year old female is enroute to the hospital with her family. She has suffered burns after an explosion from a bonfire. It is 10 pm and her expected arrival is in 5min.

How are you going to prepare for the arrival of this patient?

Component 1: Candidates were asked to outline their planning and preparation for an expected paediatric trauma case. Resource management and an understanding of available resources in Scenarioville was expected. Few candidates considered radiology or pathology resources. Knowledge of paediatric airway equipment, drug dosing and weight estimates were also an expected part of planning.

Component 2: Candidates were asked to describe their assessment of the patient, with most candidates using a structured approach such as EMST or APLS. Specific assessment of the burn was expected. Recognition of the potential for airway burns was essential. Principles of management of fluids and analgesia were also explored.

Component 3: Candidates were expected to recognise the need for transfer to a specialist centre. An acute deterioration in the patient's condition prompted the need for intubation prior to transfer, and candidates were expected to develop a safe plan for airway management.

Viva 7: Regional Anaesthesia

CANDIDATE INSTRUCTIONS

A 70 year old man is having an elective total knee replacement. He has a preference to be awake for the procedure. You do a thorough pre-operative assessment on this patient and he is deemed safe to proceed in Scenarioville.

What pertinent contraindications would you consider for a spinal anaesthetic?

Component 1: Candidates were required to list absolute and relative contraindications to, as well as immediate and late potential complications of neuraxial block.

Component 2: Candidates were asked to describe their practice in performing a spinal block, including dose of local anaesthetic, positioning during and after block insertion, and time frames and assessment of block adequacy with reference to pain/discomfort, sensation, motor function/Bromage score and dermatomal levels. Candidates were also expected to describe their approach to troubleshooting during the performance of a spinal block if they were initially unable to locate the intrathecal space including measures such as changing the needle insertion angle, repositioning the patient, changing the intervertebral space, paramedian approach, performing a combined spinal-epidural and use of an ultrasound to locate the midline/intrathecal space.

Component 3: The scenario moves to the end of the surgical procedure, during wound closure, when the patient becomes anxious and complains of feeling discomfort. Candidates are expected to describe their actions to assess the patient and clarify that the patient is feeling pain, and then address this by pausing the surgery and offering conversion to general anaesthesia. Good candidates were able to describe stepwise escalation of analgesia and sedation such as local infiltration, inhaled nitrous oxide, opioids and other analgesics such as ketamine or dexmedetomidine, propofol sedation and conversion to full GA. Candidates were then asked for their safe management of airway obstruction due to oversedation, which included immediate application of airway manoeuvres, use of airway adjuncts, application of a bag-mask ventilation and further advanced airway management (LMA or endotracheal intubation) as warranted.

Viva 8: Airway Management

CANDIDATE INSTRUCTIONS

A 37 year old woman is booked for a diagnostic laparoscopy and dye studies today for investigation of infertility. She has a weight of 95kg, BMI of 35, but otherwise no significant medical history or known allergies. She has not been seen in the pre-anaesthetic clinic.

How would you assess this patient's airway when planning your anaesthetic?

Component 1: Candidates needed to consider the patient's context in their approach to airway assessment and planning. Good candidates considered obstructive sleep apnoea and included appropriate adjuncts and planning for the obese patient. Additionally, candidates were tasked with explaining and justifying their ventilation plan. They were expected to consider the influence of positioning, pneumoperitoneum and obesity on ventilation.

Component 2: This component focused on the intraoperative management of the loss of the CO₂ trace after the commencement of surgery. Candidates were expected to initiate temporising measures and outline a systematic approach to diagnoses and management, considering patient, airway, circuit and machine causes.

Component 3: This component focused on extubation, handover and crisis management in recovery. Candidates were tasked with explaining their extubation criteria and handover process. The clinical scenario transitioned to the Recovery/Post-Anaesthetic Care Unit (PACU) where the patient was having trouble breathing and candidates were required to describe their approach. Some candidates gave a superficial "ABCD" spiel when describing assessment of the patient; better candidates provided a tailored assessment that considered contributing patient, surgical and anaesthetic factors with relevant differentials, possible management options and post-operative disposition.

Final comments

The Court wishes to pass on its congratulations to all successful candidates.

In addition, we hope that this valuable resource is used by candidates preparing for future attempts at the RGA SSSA Examination.

Dr Min-Qi Lee

Chair, RGA Examination